

Massachusetts DEP Recycling Participation Study

June 2000

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I. Objectives and Methodology

A) Objectives of the Study

- Assess recycling participation patterns and how they have changed over the past 4 years;
- Understand attitudes and perceptions toward recycling and how they have changed over the past 4 years;
- Investigate workplace recycling programs and participation in programs;
- Understand the impact of pay-as-you-throw (PAYT) programs on recycling attitudes and participation levels;
- Examine usage, satisfaction and convenience levels associated with HHW collection centers;
- Explore the public's understanding and disposal behavior of household items containing mercury.

B) Survey design and methodology

Method: Computer-Assisted Telephone Interviewing

Interviewing dates: June 2-14, 2000

Sample size: Representative sample of 750 Massachusetts residents

Margin of error: ± 3.6 percentage points at the midpoint of 95% confidence level

Other quotas: 100 interviews with residents in communities with pay-as-you-throw programs
100 interviews with residents in communities with HHW collection centers
Lists of communities were provided by MA DEP, and overall results were weighted to be representative of residents statewide.

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II. Key Findings

Key findings: Participation

- **Recycling participation has improved over the last four years.**
 - Residents are more likely to say they “always” recycle specific types of materials. Residents that are classified as “recycling all that they can” represent about 50% of the state’s households.
 - There is also an increase in the portion of residents that “always” recycle newspaper, glass, plastic, and metal containers.
 - Paper products show the largest increases in the percentage of people that “always” recycle. Recycling of paper, paperboard, and corrugated cardboard increased most noticeably since 1996.
 - Recycling participation in pay-as-you-throw communities exceeds the statewide average by a noticeable margin.
 - The state’s strongest recyclers, in terms of demographics, continue to be older residents and those who’ve lived in their community for more than ten years.

- **While recycling has improved since 1996, there is still significant room for improvement.**
 - About one in four residents is essentially not participating in the state's recycling effort.
 - About one-half of residents do not regularly recycle paperboard, regular paper, or corrugated cardboard.
 - The Southeast region of the state reports a noticeably lower level of recycling participation and households in this region are less likely to say they are committed to recycling.
 - While a majority of residents say they know that waste such as car batteries, large appliances, and yard waste is banned from disposal, most residents do not know that more traditional "recyclables" like plastic containers and recyclable paper are also banned.

Key findings: Attitudes toward Recycling

- **For the most part, attitudes about the benefits of recycling have not changed since 1996.**
 - A strong majority of residents continue to believe recycling is good for society and conserves resources for the future.
 - Two-thirds of residents say their household is committed to recycling. There is also a strong relationship between perceptions that the household is committed to recycling and reported recycling activity: Households that say they are committed to recycling are most likely to be recycling all they can.
- **Attitudes toward the recycling process are essentially unchanged since 1996.**
 - Attitudes toward the recycling process continue to be strongly related to reported recycling participation.
 - Residents that participate most heavily in recycling are more likely to view the recycling process as easy and part of their habits. Residents that recycle little, however, are less likely to see the recycling process as easy or habit-forming and are also more likely to think information about recycling isn't easy to obtain or understand.
 - Residents of PAYT communities find recycling easier, more convenient, less of a hassle and are less likely to need reminders to recycle than respondents from other parts of Massachusetts.

Key findings: Workplace Recycling

- About two-thirds of residents who work in office buildings say their workplace has a recycling program, a slight decrease from 1996 results.
- Nearly all workplace recycling programs offer white paper recycling and seven in ten programs cover deposit containers. About one-half to two-thirds of the programs accept colored paper, newspapers, or non-deposit containers.
- At least seven in ten people recycle white paper, colored paper, newspaper, and deposit containers (if accepted by their workplace program).
- Recycling non-deposit containers at work offers the most opportunity for improvement. Among offices with programs that accept non-deposit containers, only 58% of residents say they always recycle this type of container.

Key findings: Household Hazardous Waste Disposal

- **More than one-half of residents (56%) say they've disposed of household hazardous waste (HHW).**
 - The majority of people who've disposed of HHW say they took it to a collection center, but 14% continue to throw it out with regular trash.
 - The presence of a permanent HHW collection facility does not seem to impact disposal behavior: residents of these communities are equally likely to use a collection program or throw HHW out with regular trash.
 - Nearly all residents who've used a HHW collection program were satisfied with the program.
 - The survey results suggest that residents of communities with permanent HHW collection centers could be more informed about the centers. Specifically, residents of these communities were no more likely than the statewide average to think their community has a collection center that accepts paint, used motor oil, and other materials.

- **Awareness of mercury content in household items varies, but regardless of awareness of mercury content in items like thermometers, a strong majority of residents throw these items away with other household garbage.**
- Two-thirds of residents think mercury contamination poses no threat to wildlife in MA lakes and rivers or don't know the extent or impact of mercury contamination in the state.

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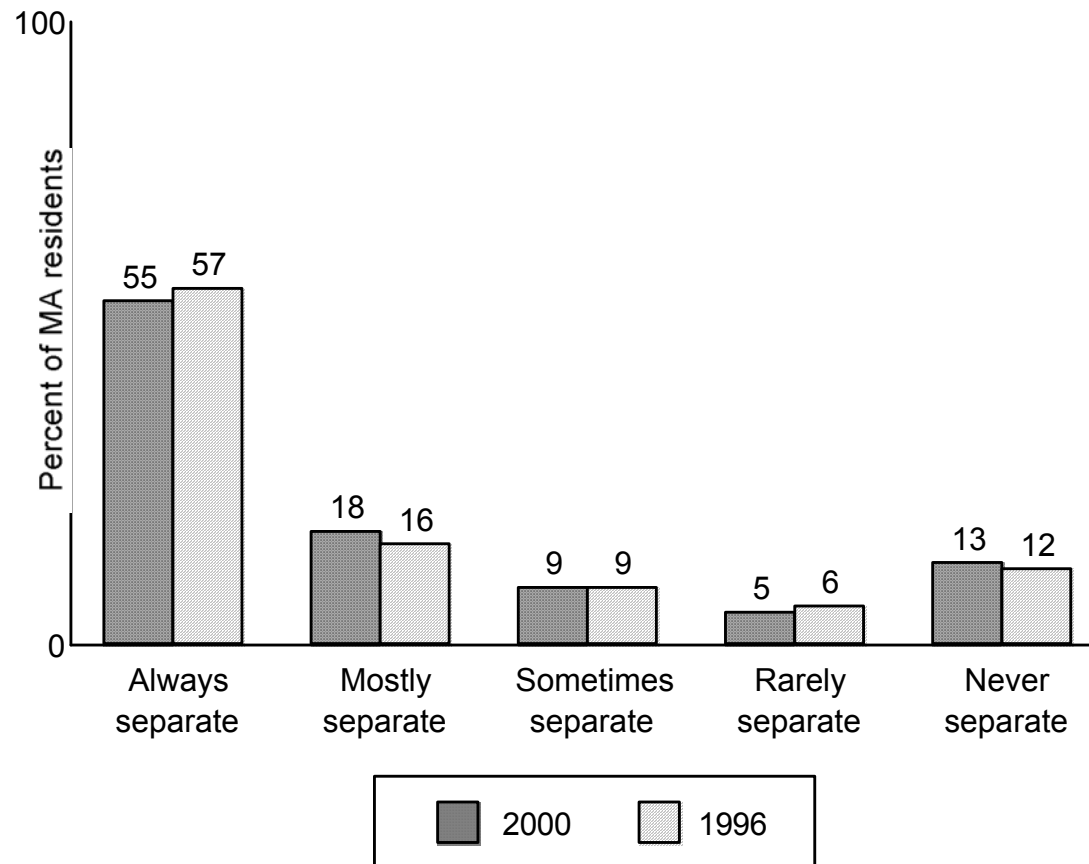
III. Overview of Recycling Patterns

Perceptions of Recycling Behavior

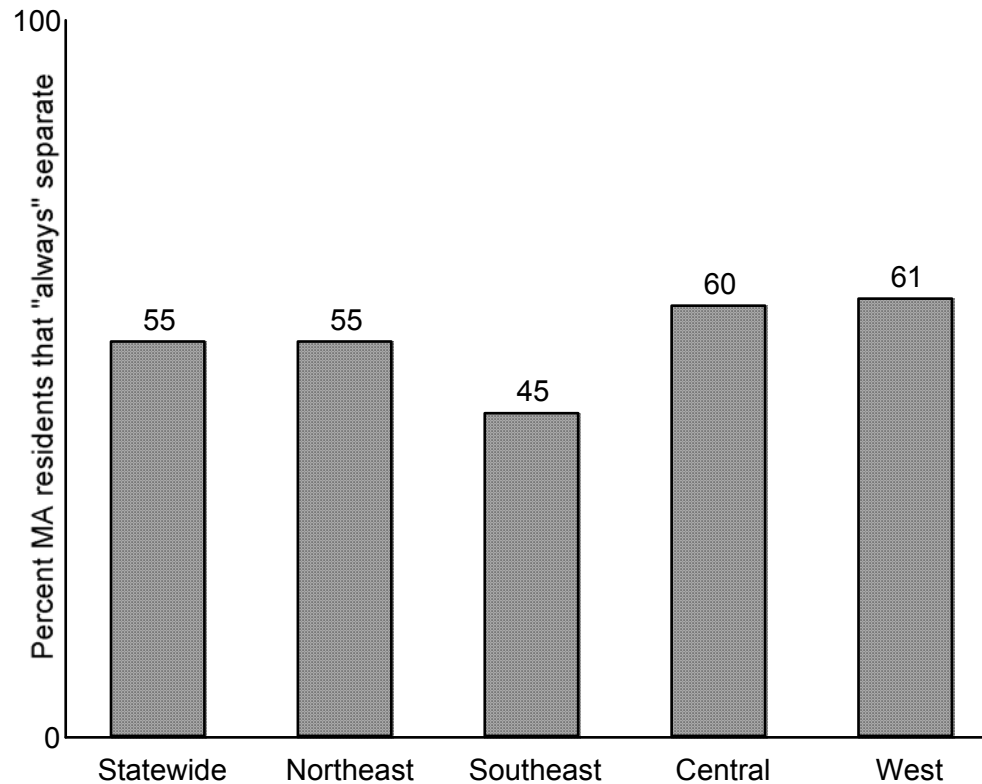
Residents were asked to assess their household's recycling behavior at an overall level and by type of material.

- At an overall level, more than one-half (55%) of residents statewide say they always separate recyclables from normal household waste, while an additional 18% mostly separate recyclables.
- Twenty-eight percent of residents, however, indicate they rarely or never separate recyclables.
⇒ These results are essentially unchanged from 1996 results.
- Similar to 1996 results, there are variations in overall recycling behavior between regions in the state.
- Households in the West and Central regions are most likely to say they always separate recyclables, while households in the Southeast are least likely to say they always separate.

Self-Reported Recycling Behavior: Overall Household Participation



Self-reported Recycling Behavior: Overall Household Participation by Region (2000 Results)



Perceptions of Recycling Behavior vs. Self-Reports of Specific Recycling Activities

In addition to exploring people's perceptions of their general recycling behavior, we asked to what extent respondents recycle the seven specific categories of materials listed below.

- Glass bottles and jars
- Metal cans
- Newspapers and magazines
- Regular paper, such as envelopes letter paper, and junk mail
- Plastic bottles and containers from things like juice, milk, or detergent.
- Paper boxes, such as cereal boxes
- Corrugated cardboard boxes

Self-reported recycling habits for each material are discussed on the following pages.

2000 Results Overall

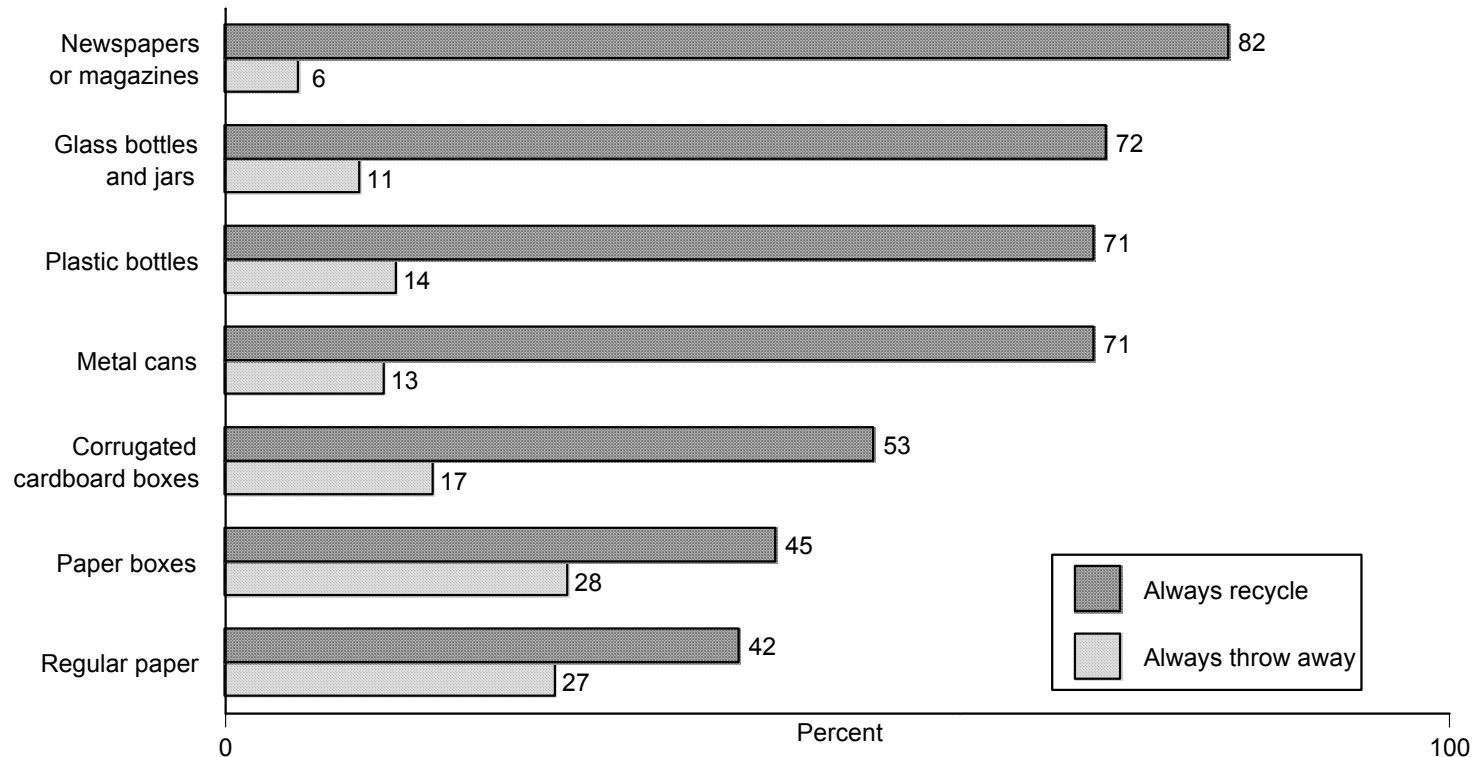
- As shown in the next chart, a strong majority of state residents say they always recycle newspapers and magazines, plastic bottles and containers, glass bottles and jars, and metal cans.
- The three types of paper materials are always recycled at a lower rate, but a substantial portion residents do say they always recycle corrugated cardboard, paperboard boxes, and regular paper.

2000 vs. 1996 Results

Recycling participation has increased noticeably in all seven categories addressed in the survey, compared to 1996 levels (see following table).

- In 2000, residents are more likely to say they “always” recycle a given material, and less likely to say they “never” recycle each material.
- The largest increase in the percent of residents that always recycle is in the category of regular paper (up 24 percentage points from 1996 results).

Recycling Rates for Specific Materials (2000 Overall)



* Among households that regularly purchase new papers or magazines, 82%

Recycling Rates for Specific Materials: 2000 vs. 1996 results

Category of material	Percent always recycle		Percent always throw away	
	2000	1996	2000	1996
Newspaper, magazines	82	73	6	15
Glass bottles, jars	72	62	11	22
Plastic containers	71	62	14	24
Metals cans	71	62	13	23
Paperboard	45	31	28	46
Regular paper	41	18	27	53

Recycling Participation Index

To assess residents' propensity to recycle four common materials (newspaper, glass, metal cans, and plastic containers), we created an index that measures the percent of residents that "always recycle" one, two, three, or all four of these materials.

- As shown on the following table, forty-one percent of residents report "always" recycling all four target materials.
- Another 19% say they "always" recycle three of the four materials.
 - While the percent of residents that "always" recycle an individual category of material has increased at least 10% for all four materials since 1996, it appears that residents are only slightly more likely to "always" recycle all four types of materials.

Percent of Residents that "Always" Recycle Multiple Material Types

Number of materials	Percent always recycle	
	2000	1996
Four	41	39
Three	19	19
Two	9	10
One	10	11
None	21	21

Recycling Participation Categories

To get a sense of the outer range of recycling participation, residents were also grouped (with the resulting percentages indicated) assuming a worst case overlap between "recycling" and deposit return behavior. Residents that don't subscribe to or recycle newspapers but do recycle glass, plastic, and metal cans are also included in the "alpha" segment. These groupings provide the probable low ranges for recycling and high ranges for non-recycling.

Alpha recyclers--doing all they currently can

- Recycle all 4 target materials
- Don't subscribe to newspapers and do recycle 3 other target materials

Swing (high) recyclers--doing nearly all they can

- Subscribe to but don't recycle newspapers and do recycle 3 other target materials
- Subscribe to and recycle newspapers but only recycle 3 target materials

Swing (low) recyclers--making a small effort

- Recycle 1 target material, which is not a deposit item (bottles or cans)
- Recycle 2 target materials, one of which is a deposit item (bottles or cans)
- Recycle 2 materials, neither of which is a deposit item (bottles or cans)

Not participating in recycling effort

- Recycle 0 of the 4 target materials
- Recycle only 1 material which is a deposit item (bottles or cans)
- Recycle 2 materials, both of which are deposit items (bottles or cans)

Recycling Participation Categories: 2000 vs. 1996

Category	Percent	
	2000	1996
Doing all they can (alpha recyclers)	50	45
Doing nearly all they can (swing-hi segment)	10	13
Making a small effort (swing-lo segment)	13	13
Not participating in the recycling effort	27	29

Recycling Participation Ranges

Using the different ways of measuring recycling participation yields the following ranges for recycling behavior among Massachusetts residents:

Category	Percent	
	2000	1996
Recycle everything possible	41-50%	39-45%
Recycle most of what is possible	10-19%	13-19%
Recycle some of what is possible	9-10%	10-13%
Don't recycle	21-27%	21-29%

- The upper range of the percent of residents recycling as much as they can has increased somewhat since 1996, from 45% to 50%.
- On the other end of the continuum, 37% of Massachusetts residents essentially do no or very little recycling (27% of the "don't recycle" group and 10% of the "some" group). This figure has decreased somewhat since 1996, when 42% of residents could be classified in this category.

Recycling Participation in PAYT Communities

To understand the impact of pay-as-you-throw (PAYT) programs on recycling rates, we compare statewide participation to participation in communities with PAYT.

- Recycling participation for individual materials is noticeably higher in PAYT communities. The difference is most noticeable for paper products (corrugated cardboard, paperboard, and paper.)

Category of material	Percent always recycle	
	Statewide	PAYT
Newspaper, magazines	82	94
Glass bottles, jars	72	86
Plastic containers	71	82
Metals cans	71	84
Corrugated cardboard	53	73
Paperboard	45	60
Regular paper	41	50

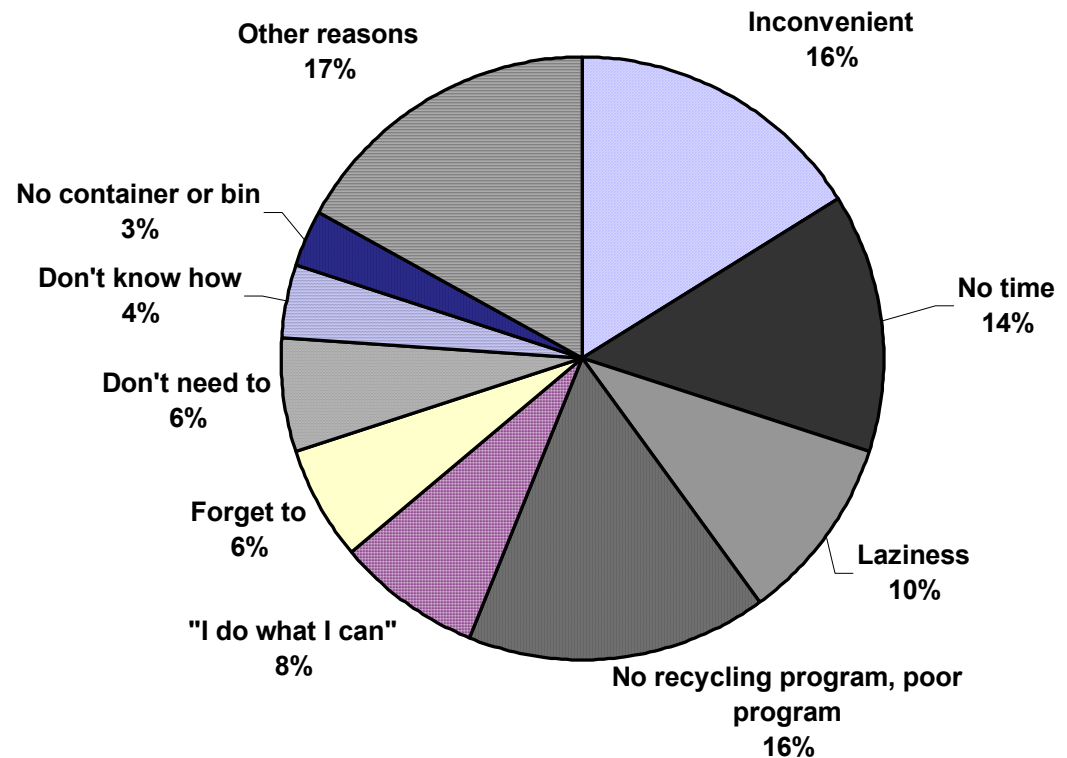
- Residents in PAYT communities are also more likely to be “doing all they can,” compared to results statewide. In PAYT communities, 70% of residents are “doing all they can,” compared to 50% statewide.
- At the other end of the participation scale, 14% of residents in PAYT communities are “not participating” compared to 27% statewide.
- In conclusion, the presence of PAYT programs is related to higher levels of reported recycling behavior.

Category	Percent	
	Statewide	PAYT towns
Doing all they can (alpha recyclers)	50	70
Doing nearly all they can (swing-hi segment)	10	11
Making a small effort (swing-lo segment)	13	5
Not participating in the recycling effort	27	14

Stated Reasons for Not Recycling

When asked why they don't always recycle, residents are most likely to indicate it is due to inconvenience, lack of time, laziness, or perceived lack of access to recycling programs.

- The reasons residents give for not always recycling are essentially unchanged since 1996.
- As seen in the 1996 results, very few residents indicate they don't recycle because they are opposed to it or don't think it's important. The reasons people don't always recycle typically relate more to time, convenience, or perceived access.
- Verbatim responses to this question are shown, sorted by code, are included in the appendix.



Variations in Recycling Participation by Demographic Characteristics.

As we found in 1996, recycling participation varies by demographic characteristics. Notable demographic trends and patterns are discussed in this section.

- **Age:** Recycling participation continues to be correlated with age, such as that older residents are more likely to say they “always” recycle, compared to younger residents.
- **Education level** is not strongly related to recycling participation. There is a slightly higher propensity to recycle, however, among residents that have a least some college education.
- **Household income:** While recycling participation varies slightly with income, there is not a predictable relationship between the characteristics.
- **Children in the household:** As seen in 1996, the presence of children in the household does not appear related to recycling participation.
- **Tenure in the community:** As seen in 1996, residents that have lived in their community for 10 years or more report higher levels of recycling participation than residents who’ve lived in the community for a shorter period of time.

Recycling Behavior by Housing Type

- Residents who live in single family homes are more likely to “always recycle” all four materials (53%) as compared to residents living in two-six family homes (34%).
- Specifically, residents in single family homes are significantly more likely to “always recycle” glass bottles and jars, plastic containers, and metal cans than residents living in two-six family homes.

Category of material	Percent always recycle		Percent always throw away	
	Single family home	Two-Six family home	Single family home	Two-Six family home
Newspaper, magazines	85	78	6	8
Glass bottles, jars	76	61	8	17
Plastic containers	76	60	10	23
Metals cans	75	64	11	16
Paperboard	46	47	26	29
Regular paper	44	37	24	30

Perceived Access to Recycling

Residents were asked what type of recycling services are available to them, either through their town or private haulers.

- 56% of residents say they have curbside recycling, while 13% believe their town provides a drop-off center for recycling. Five percent of residents recycle through the private hauler they also use for regular trash.
- Approximately one in ten residents perceive they do not have access to recycling services.

Reported Access to Recycling Services

Reported recycling access	2000	1996
Curbside recycling	56%	49%
Drop-off recycling	13%	12%
Private hauler recycling	5%	4%
No access through apt/condo building	11%	19%
No access (all other housing types)	9%	11%
Don't know	6%	5%

- Compared to 1996 results, residents are more likely to report having curbside recycling and less likely to think that their apartment or condo building doesn't have a recycling program.
- The percentage of apt/condo dwellers reporting that their building has a recycling program has nearly doubled since 1996, increasing from 21% to 39%.

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IV. Attitudes toward Recycling

In this section, we examine the general attitudes Massachusetts residents have toward recycling, and their specific attitudes toward the recycling process in their community.

Overall, residents are more likely to say that their household is committed to recycling (66%) than they are to say that recycling benefits their community (53%) or recycling benefits them personally (44%). These results are essentially unchanged since 1996.

- There are slight geographic differences in attitudes about commitment to and benefits of recycling.
 - Western Massachusetts residents provide somewhat higher ratings for all three of these measures.
 - Consistent with lower reported recycling activity, residents in the Southeast region are also least likely to indicate their household is committed to recycling (55% vs. 66% statewide).

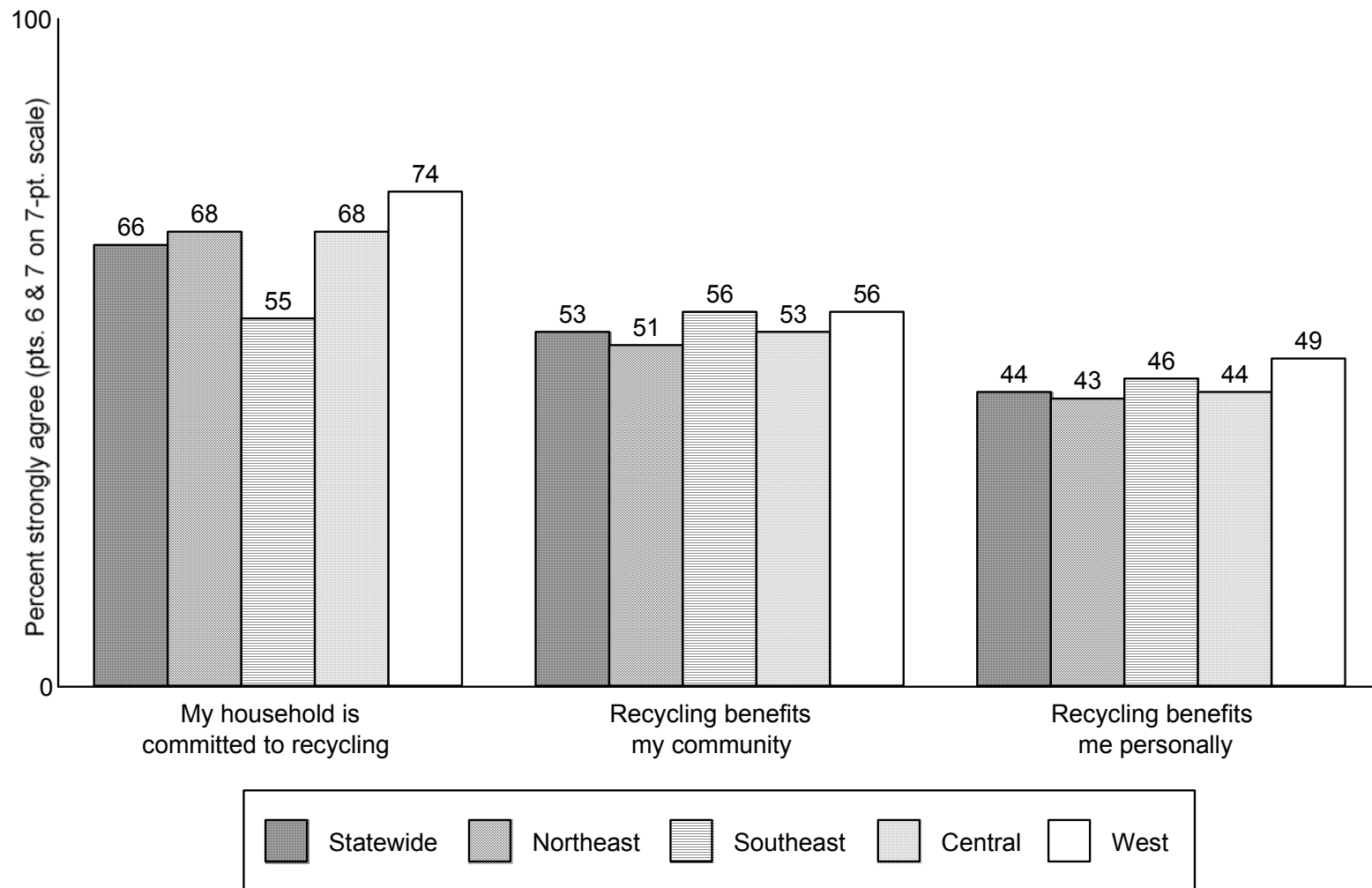
- There is a clear pattern of differences based on age.
 - Older residents (over age 56) are significantly more likely to say their household is committed to recycling (78%) followed by those between the ages of 36-55 (60%) and then younger residents (under age 35) (46%).
 - This pattern is consistent with 1996 results.
- Similar to 1996, residents with children are also more likely to agree with the premise that recycling benefits their community (59% versus 50% without children in their household).
- Residents in communities with pay-as-you-throw programs are significantly more likely to say that their household is committed to recycling as compared to residents from the rest of Massachusetts (82% versus 64%).

- Attitudes toward recycling continue to correlate positively with reported recycling behavior.
 - Residents who believe their household is committed to recycling are more likely to recycle more types of materials.
 - Both residents who say that recycling benefits their community and residents who believe that recycling benefits them personally are more likely to recycle more materials than are others.

Type of Recycler	Household Commitment to Recycling	Benefits Them Personally	Benefits Their Community
Always recycle all 4	93%*	54%	62%
Always recycle 3	80%	47%	58%
Always recycle 2	53%	37%	40%
Always recycle 1	33%	20%	37%
Always recycle 0	24%	38%	44%

* Percentages are based on top box ratings (6,7 on a 7-point scale).

Overall Attitudes toward Recycling



Perceptions of the Overall Benefits of Recycling

It appears that the broad messages about the positive benefits of recycling have been largely accepted by Massachusetts residents. Perceptions of the overall benefits of recycling remain consistent with 1996 findings.

- The vast majority of Massachusetts residents (90%) believe that recycling is "good for society" regardless of actual recycling behavior.
- About three-fourths believe that recycling conserves resources for the future, while fewer agree with the more specific statements that recycling provides Massachusetts companies with materials for manufacturing (45%) or that recycling provides jobs to Massachusetts residents (38%).
- Most residents disagree with the idea that individuals cannot do much to help solve the solid waste problem (63% disagree). Younger residents (under age 55) are more likely to disagree with this statement as compared to older residents (over age 55) (58% versus 46%).
- Most residents would prefer to live in a town that offers curbside pick-up of recycling (84%).

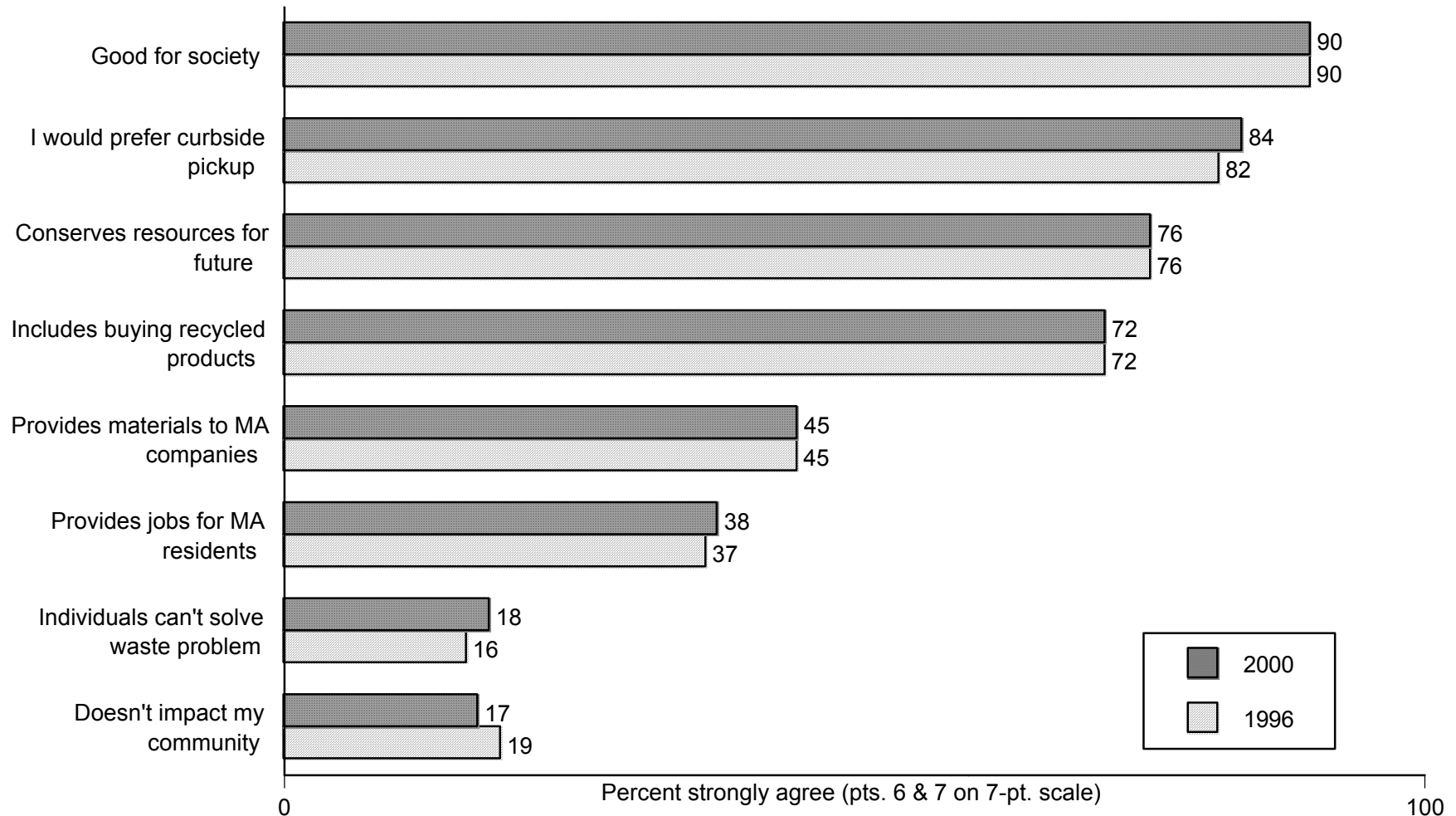
About half disagree with the premise that recycling has little impact on their community (51%).

- Residents with children in their household are more likely to disagree with the statement that recycling has little impact (57%) as compared to those without children in their household (48%).
- This finding is consistent with 1996 results.
- There are geographic differences with regards to the benefits of recycling. Residents from the Central region are less likely to perceive the benefits of recycling while residents from the West are more likely to see the benefits.
 - Residents from the Central region are less likely to believe that:
 - ⇒ Recycling is good for society;
 - ⇒ Recycling will ensure resources will be conserved for future generations.
 - Residents from the West are more likely to believe that:
 - ⇒ Recycling provides Massachusetts companies with materials they need to manufacture products;
 - ⇒ Part of recycling is buying products that are made from or contain recycled materials.

Residents in communities with pay-as-you-throw programs do not have significantly different views about the benefits of recycling.

- Consistent with 1996, there are also household income and educational differences in attitudes toward the benefits of recycling. Residents with lower household incomes (under \$25,000) and those with a high school degree or less are significantly more likely to think that:
 - Recycling provides more jobs for Massachusetts residents than other ways of dealing with waste;
 - Individuals like me can't do much to help solve the solid waste problem;
 - Recycling provides Massachusetts companies with materials they need to manufacture products.

Perceptions of the Overall Benefits of Recycling



The next few charts show perceptions of the overall benefits of recycling according to respondents' current recycling habits.

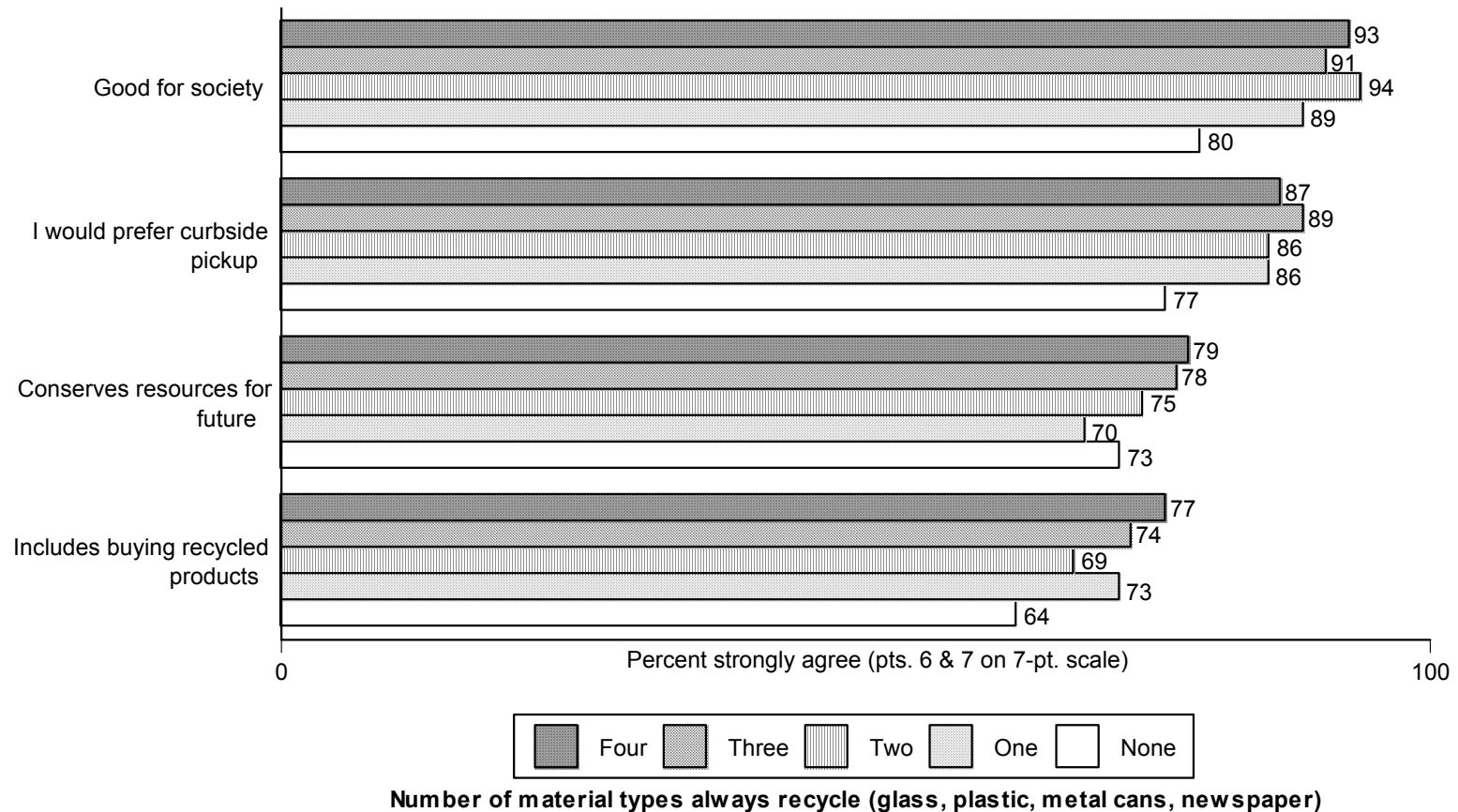
People who don't always recycle any of the four target materials are significantly less likely to agree that:

- Recycling is good for society;
- I would prefer curbside recycling;
- Part of recycling is buying products that are made from or contain recycled materials.

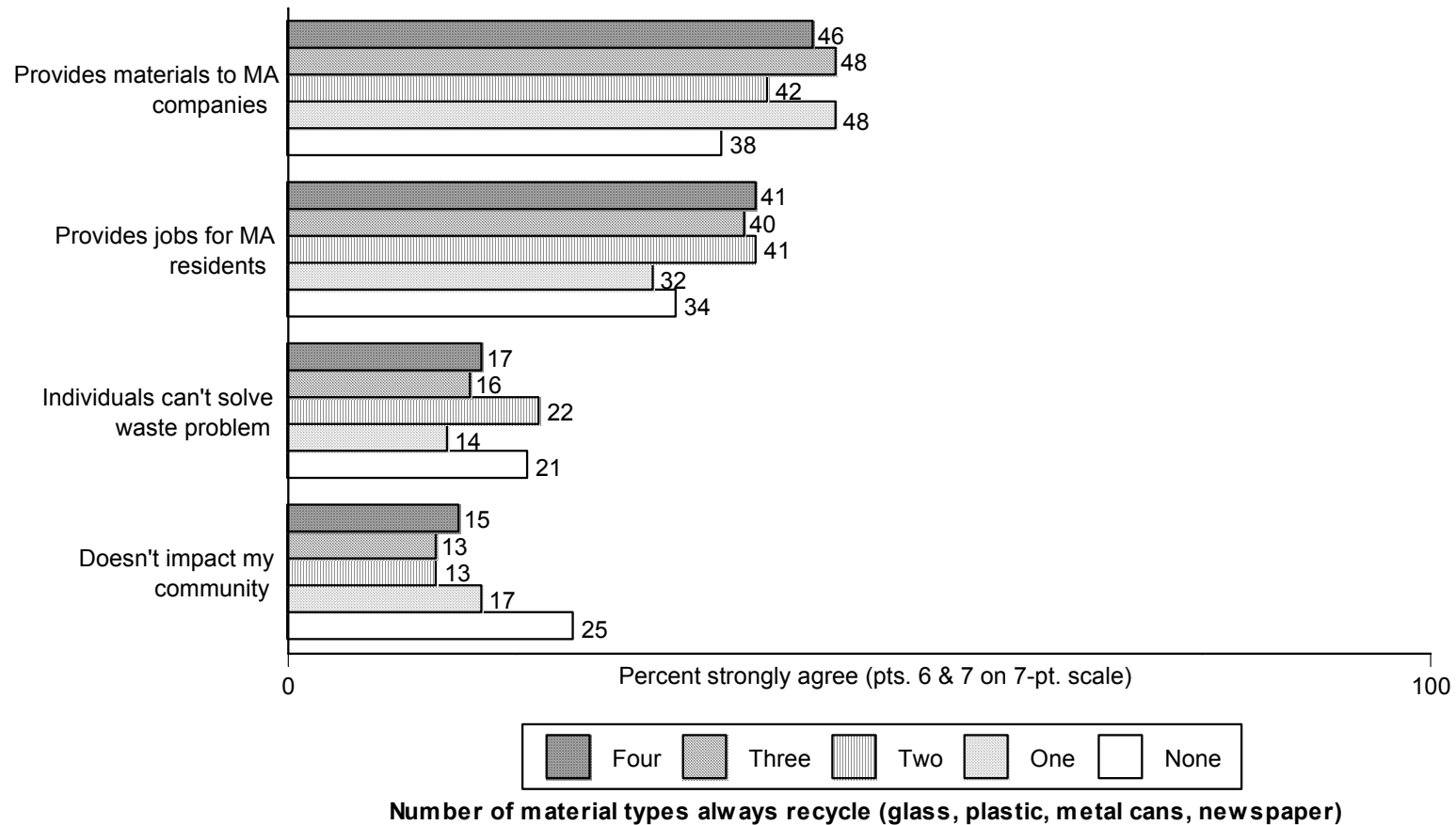
People who always recycle (three or four target materials) are significantly more likely to disagree with the statements that:

- Recycling doesn't seem to have much impact on my community;
- Individuals can't do much to help solve the solid waste problem.

Perceptions of Overall Benefits of Recycling by Recycling Habits



Perceptions of Overall Benefits of Recycling by Recycling Habits (Continued)



Attitudes toward the Recycling Process

Attitudes toward the recycling process have not changed since 1996.

The vast majority of Massachusetts residents agree that recycling becomes a habit once people get started. About two-thirds of residents agree that getting started in recycling is easy.

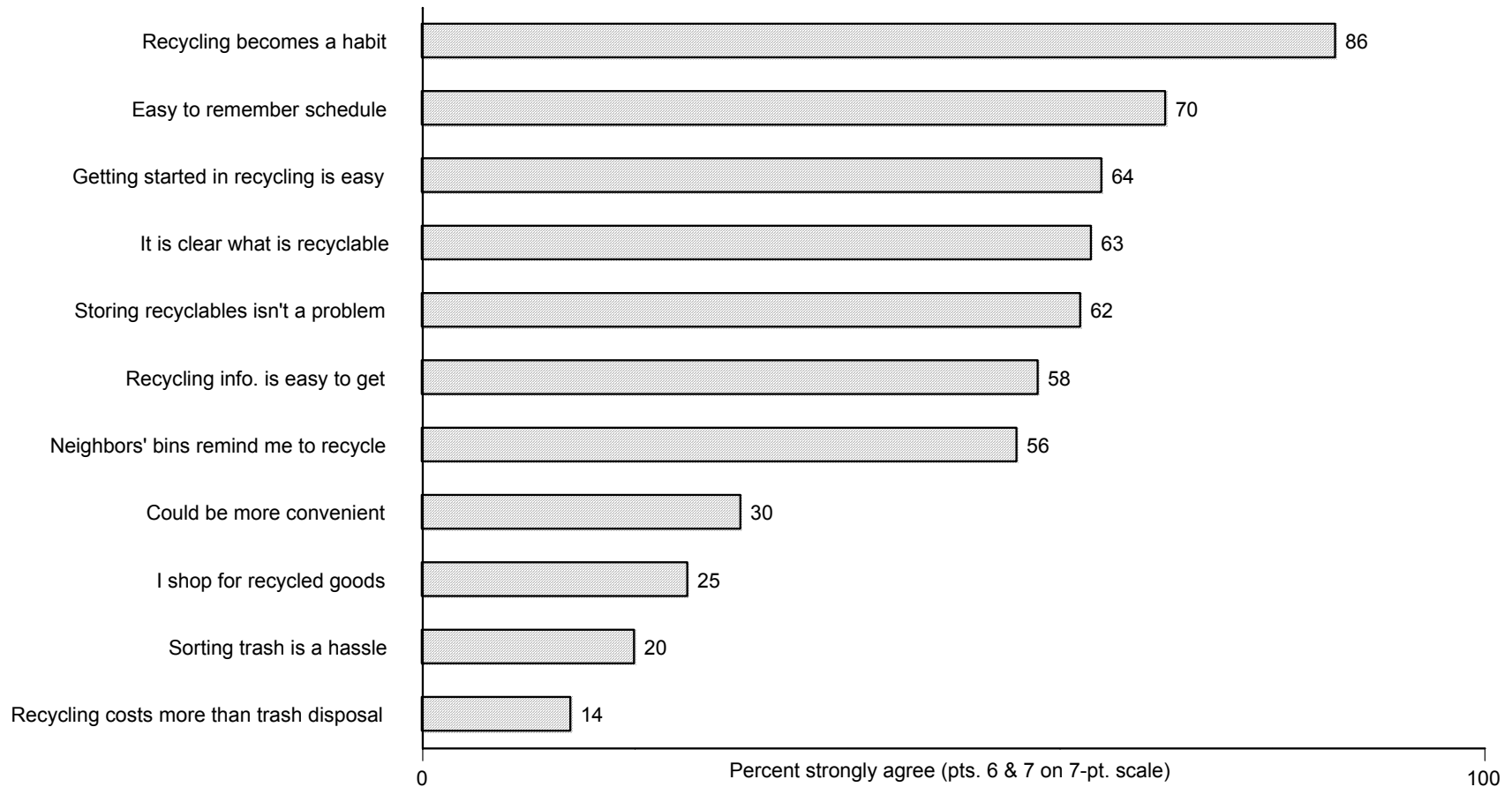
Respondents were also asked to rate the availability and clarity of information about recycling.

- About six in ten think that information is easy to get and that it is clear what types of materials are recyclable. The majority of people agree that the recycling schedule is easy to remember.
- There are age differences based on availability and clarity of recycling information. Younger residents (under age 35) are less likely to believe that getting recycling information is easy and that it is clear what materials are recyclable. Younger residents are also less likely to say that the recycling schedule is easy to remember.

More than one-half of residents agree that seeing their neighbors' recycling bins reminds them to recycle. About one-third of people think recycling could be made more convenient.

Relatively few residents feel recycling costs more than trash disposal (14%) or is a hassle (20%).

Attitudes toward the Recycling Process



Respondents in communities with pay-as-you-throw programs have different views about the recycling process than respondents from the rest of Massachusetts.

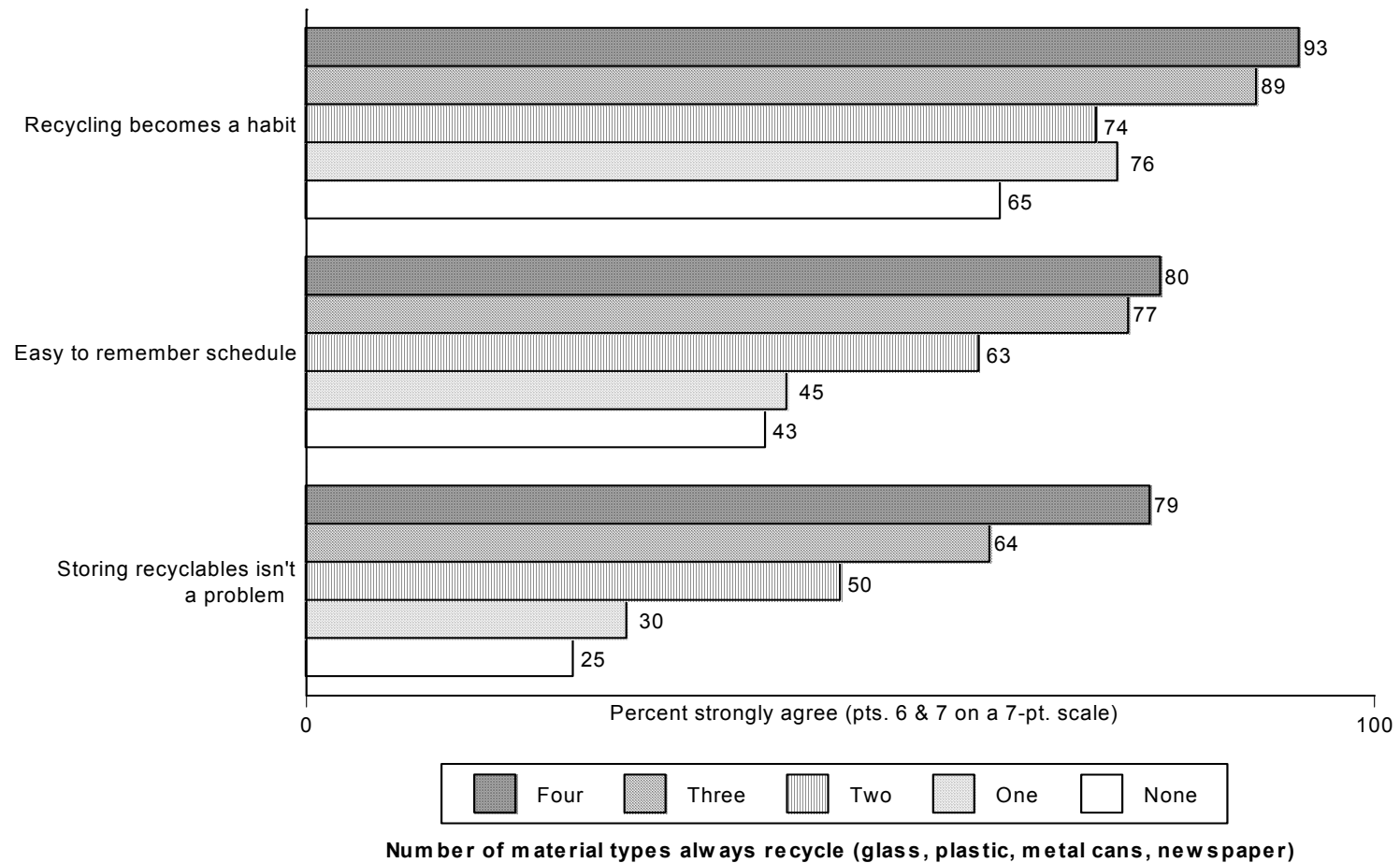
- In general, respondents in PAYT communities find recycling easier, more convenient, less of a hassle and are less likely to need reminders to recycle than respondents from other parts of Massachusetts.
- Specifically, respondents in PAYT communities are significantly more likely to think that:
 - ⇒ It is clear what materials are recyclable;
 - ⇒ Storing recyclables for later is not a problem;
 - ⇒ Getting recycling information is easy.

The next few charts show attitudes toward the recycling process according to current recycling habits.

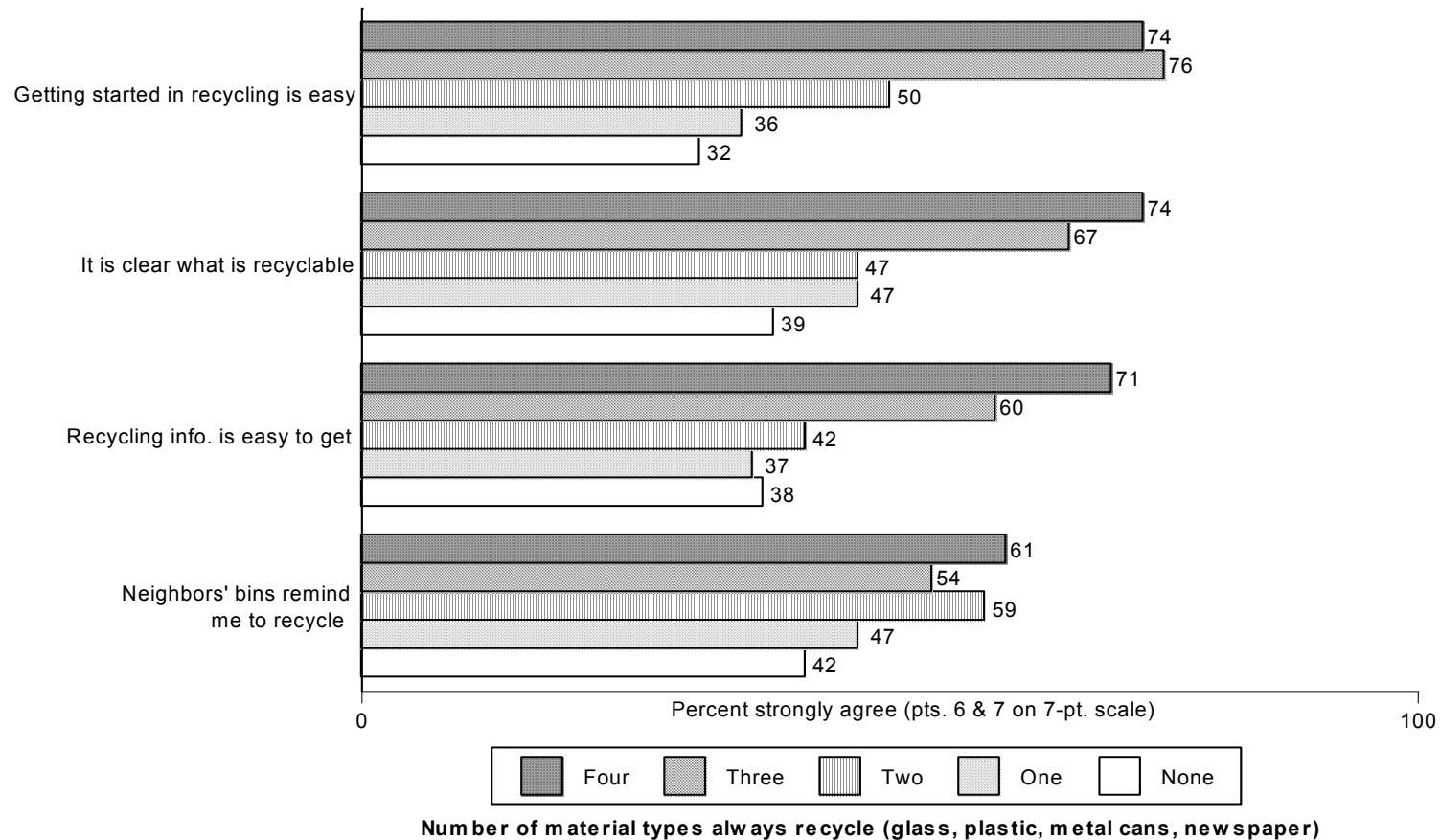
- People who always recycle three or four of the four target materials are much more likely to find recycling easy and convenient as compared to those who always recycle fewer than three of the target materials. Avid recyclers are more likely to agree that:
- Recycling becomes a habit;
- The schedule is easy to remember;
- Storing recyclables isn't a problem;
- Getting started in recycling is easy;
- It is clear what materials can and can't be recycled;
- Recycling information is easy to find.

- Less avid recyclers (people who always recycle two or three materials) are more likely to be reminded to recycle by their neighbors' bins.
- Residents who don't consistently recycle any of the four target materials are more likely to think "sorting trash for recycling is a hassle," compared to residents that are more avid recyclers.
- Shopping for recycled goods does not appear related to the propensity with which residents recycle.

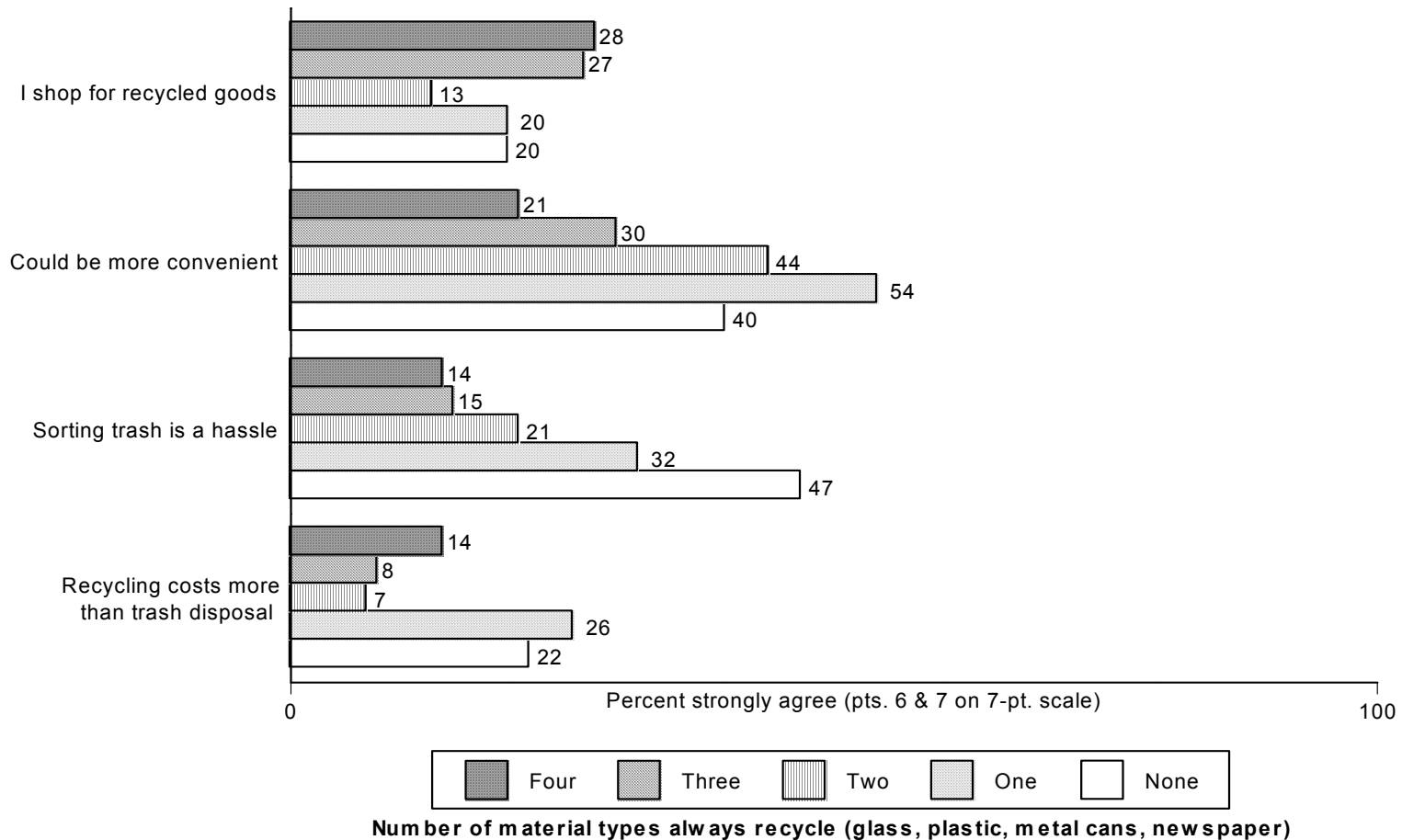
Attitudes toward the Recycling Process by Recycling Habits



Attitudes toward the Recycling Process by Recycling Habits (Continued)



Attitudes toward the Recycling Process by Recycling Habits (Continued)



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V. Workplace Recycling Programs

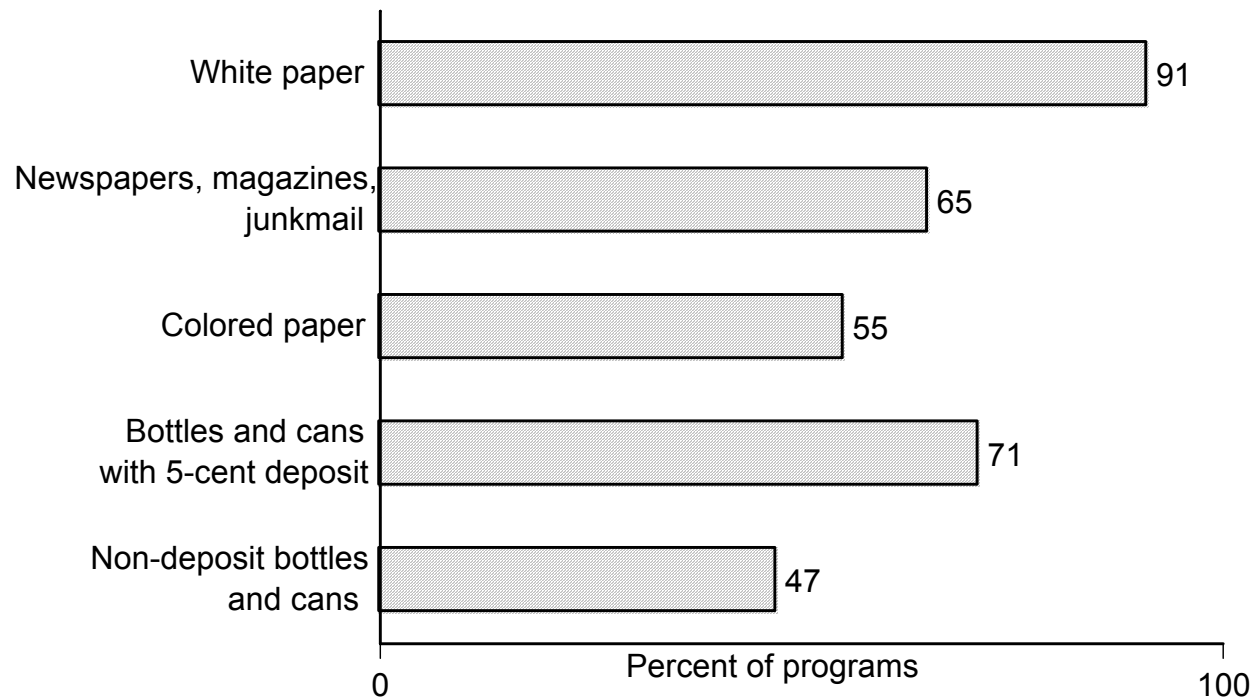
Among respondents who work in office buildings, about two-thirds (64%) report that their office has a recycling program.

- The percentage of office buildings with recycling programs has declined slightly since 1996 (69% vs. 64%).
- Southeast region residents are slightly less likely to indicate their workplace has a recycling program, compared to the statewide average (58% vs. 64%).
- Large offices and medium size office buildings are more likely to have recycling programs (71% and 68%, respectively) than small office buildings (53%).

While nearly two-thirds of office buildings in the state offer workplace recycling, the types of materials included in the program vary.

- Nearly all office recycling programs include white paper (91%).
- Colored paper (55%) and newspapers, magazines, and junk mail (65%) are less commonly included in the program.
- Deposit containers are recycled in more than seven in ten workplace programs (71%), while non-deposit containers are recycled in less than one-half (47%).

Materials Covered in Workplace Recycling Programs

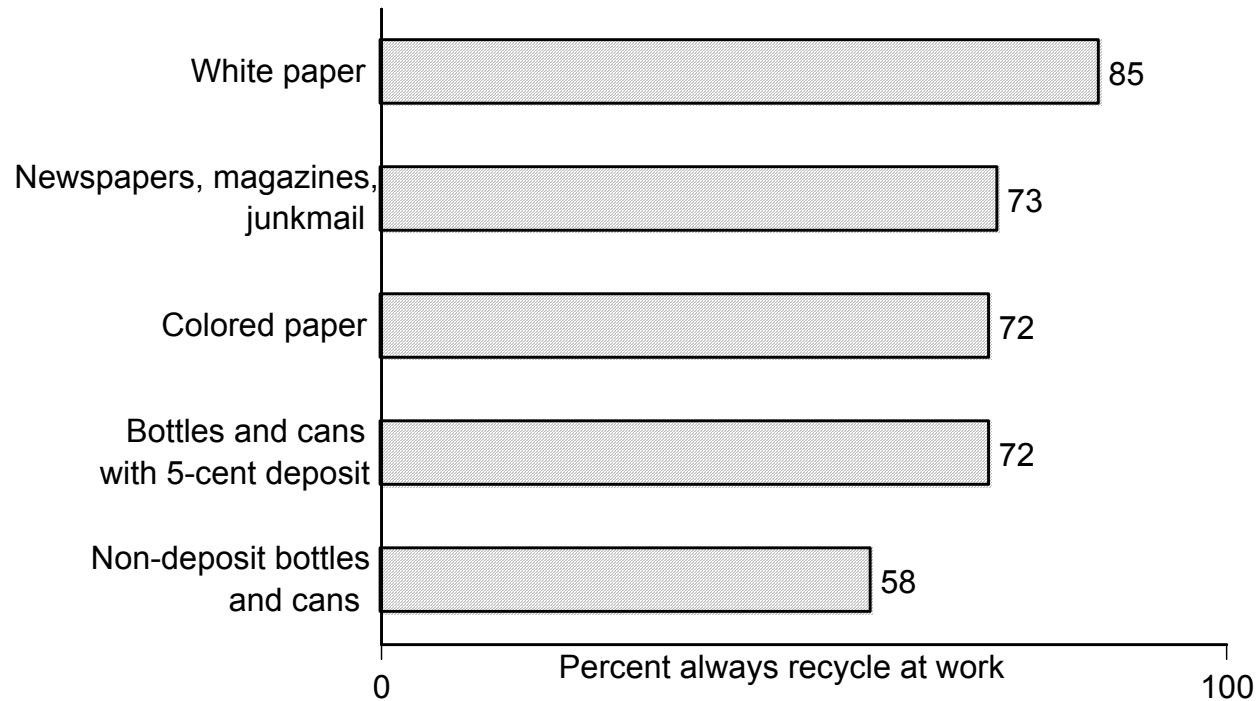


Participation in Workplace Recycling Programs

- The majority of workers (85%) report that they always recycle all of the white paper that they can. About seven in ten say that they always recycle newspapers, magazines, junk mail, and colored paper.
- Approximately seven in ten report that they always recycle glass and plastic bottles with 5-cent deposits, while fewer say they always recycle non-deposit glass and plastic bottles (58%).

Perceptions about workplace recycling participation are positive. The majority of people (64%) believe that most (at least 55%) of their co-workers recycle at work. Only one in ten believe that less than one-quarter of their co-workers recycle.

Recycling Participation in Offices



We asked residents who have a recycling program in their office a series of questions about their workplace recycling activities.

- Less than one-half of this group say their supervisor encourages recycling (41%), while more than half report that their supervisor is neutral (55%). Virtually no one said their supervisor is against recycling.
 - ⇒ People who are encouraged to recycle while at work are slightly more likely to always recycle all the materials they can.
 - ⇒ This is particularly true for the recycling of newspapers, magazines, and junk mail with significantly more people who are encouraged to recycle always recycling these items as compared to those who are neither encouraged nor discouraged (82% versus 66%).
- About one-fifth of people surveyed in this group report that someone at their job keeps track of how much the office recycles. Among this group, nearly half say the company's recycling performance is communicated to employees, most commonly on bulletin board postings (53%) or via e-mail (33%).
- Two-thirds put their paper recyclables in a bin or box by their desk, while the other third take it to a central location in the office. Conversely, the majority of people take their bottles and cans to a central location, while only about one in six put it in a box or bin by their desk.

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VI. Household Hazardous Waste Disposal

The survey asked a short series of questions designed to better understand:

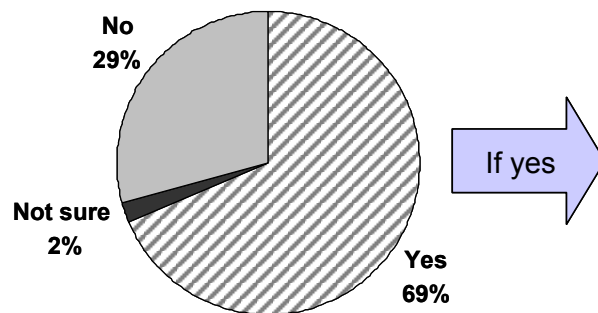
- How many households dispose of household hazardous waste (HHW) and how many use collection centers to dispose of HHW;
- Satisfaction and convenience levels associated with HHW collection centers;
- The public's understanding and disposal behavior for household items containing mercury.

To explore the impact of household hazardous waste collection programs on disposal habits and other issues, the survey also included an oversample of residents in communities with permanent HHW collection centers. The list of communities was supplied by the DEP, and 100 interviews were conducted with residents of these communities to provide a more reliable basis for comparison to the statewide results.

Disposal of HHW

- About seven in ten residents say they've had household hazardous waste.
- Among this group, 54% say they disposed of it in a HHW center in their own community. There appears to be little use of HHW centers in other communities (6%).
- Thirteen percent of those with HHW say they are still storing it at home.
- Fourteen percent put their HHW in the trash to dispose of it.
- This pattern of results is consistent across geographic regions of the state.

Have you ever had any household hazardous waste?*



*HHW described in survey as "paint, pesticides, cleaning products, or gasoline that is no longer useful to you."

How did you dispose of it?

How did you dispose of it?	
Took to HHW center in own community	54
Took to HHW center in another community	6
Put it in the trash	14
Still storing it at home	13
Had it picked up	5
Other/Don't know	8

- Residents in communities with permanent HHW collection programs are equally likely to say they've had HHW to dispose (67% vs. 68% statewide).
- Residents in these communities report HHW disposal patterns that are essentially no different than habits reported by residents statewide.

How did you dispose of your HHW?	Percent Statewide	Percent in HHW prog. towns
Took to HHW collection in own community	54	51
Took to HHW collection in another community	6	3
Put it in the trash	14	17
Other	26	29

Satisfaction with and Knowledge of Community Collection Programs

- Satisfaction is high among residents who've visited a collection program.
- 58% are very satisfied, and 26% are somewhat satisfied with the program.
- Among the small group of residents that aren't satisfied with the program they used, a majority say that "opening the program more frequently" would most increase their satisfaction.
- A majority of residents believe their community collection program accepts used motor oil (52%), surplus paint (55%), and other types of HHW (53%).
- Most residents say they learned about their community collection program through brochures in the mail (33%) or local newspapers (32%).

Residents in towns with permanent HHW collection programs are essentially no different from residents statewide in their responses to these questions.

- They are equally satisfied with the collection program they used.
- Residents in towns with permanent HHW collection centers are no more likely than residents statewide to believe their community offers a collection program for used motor oil (55%), surplus paint (56%), or other types of household hazardous waste (55%).
- These results suggest that awareness of the permanent collection centers and the types of waste accepted at the centers could be improved.

Awareness of collection program for the following materials:	Percent Statewide	Percent in HHW prog. Towns
Used motor oil	55	52
Surplus paint	56	55
Other types of household hazardous waste	55	53

Mercury in Household Waste

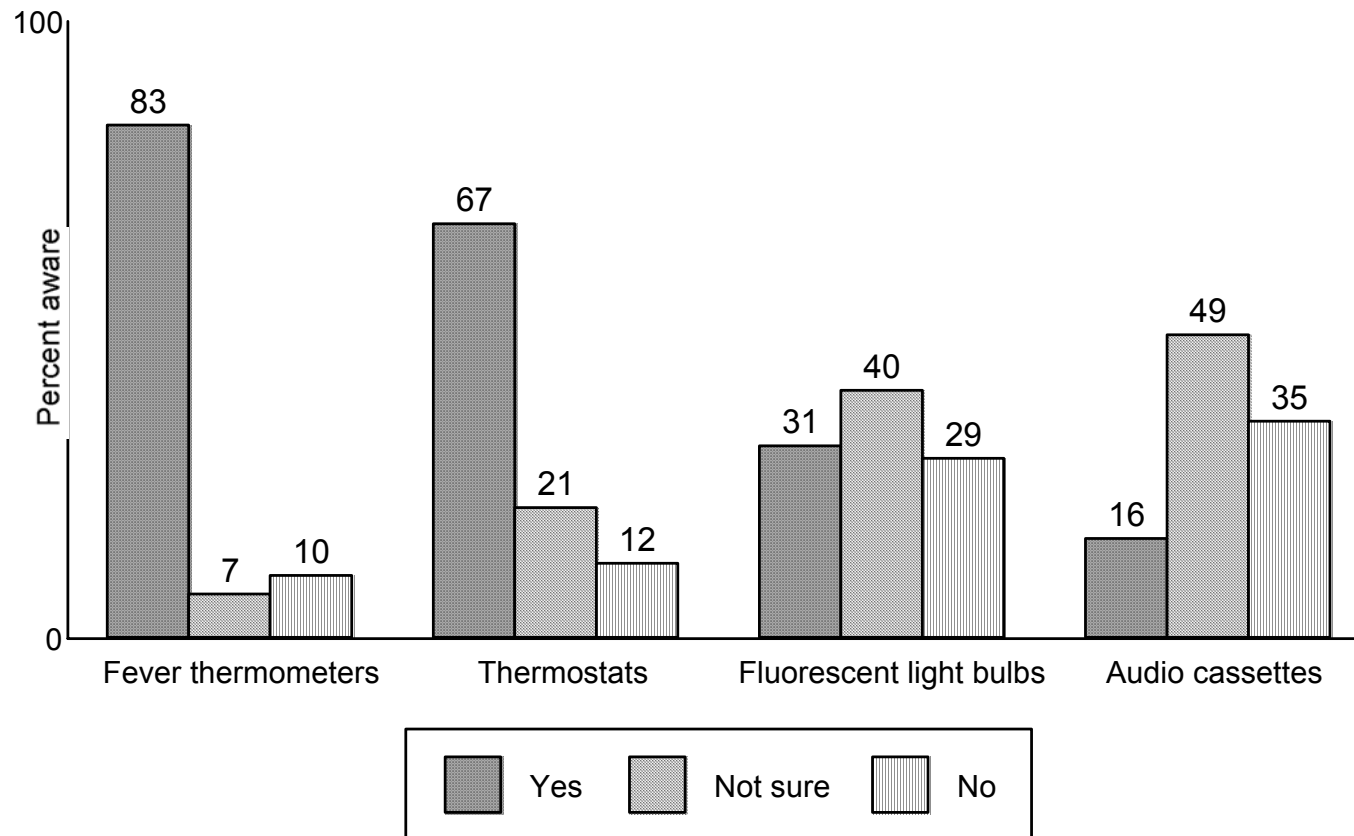
Residents were asked a series of questions to determine their knowledge of mercury content in common household items, their disposal habits for these items, and perceptions of mercury contamination in Massachusetts.

To gauge awareness of mercury in some common household items, residents were asked if, to their knowledge, there is mercury in fever thermometers, thermostats, and fluorescent light bulbs. To test the “noise” level associated with this type of question, the survey also asked if audiocassette tapes contain mercury.

- The broad conclusion that can be drawn from these results is that awareness of mercury content in relatively common household items shows room for improvement, particularly for items other than fever thermometers.

- As shown in the following chart, 80% of residents think fever thermometers contain mercury, while 67% think thermostats contain mercury.
- Only 31% of residents think fluorescent bulbs contain mercury.
- Importantly, 16% of residents also think audiocassette tapes contain mercury suggesting that there is a “noise” level associated with these types of questions. The “noise” level is probably lower for fever thermometers because more residents know these contain mercury. For items such as fluorescent light bulbs, as much as 10-15% of the stated awareness level may be “noise.”

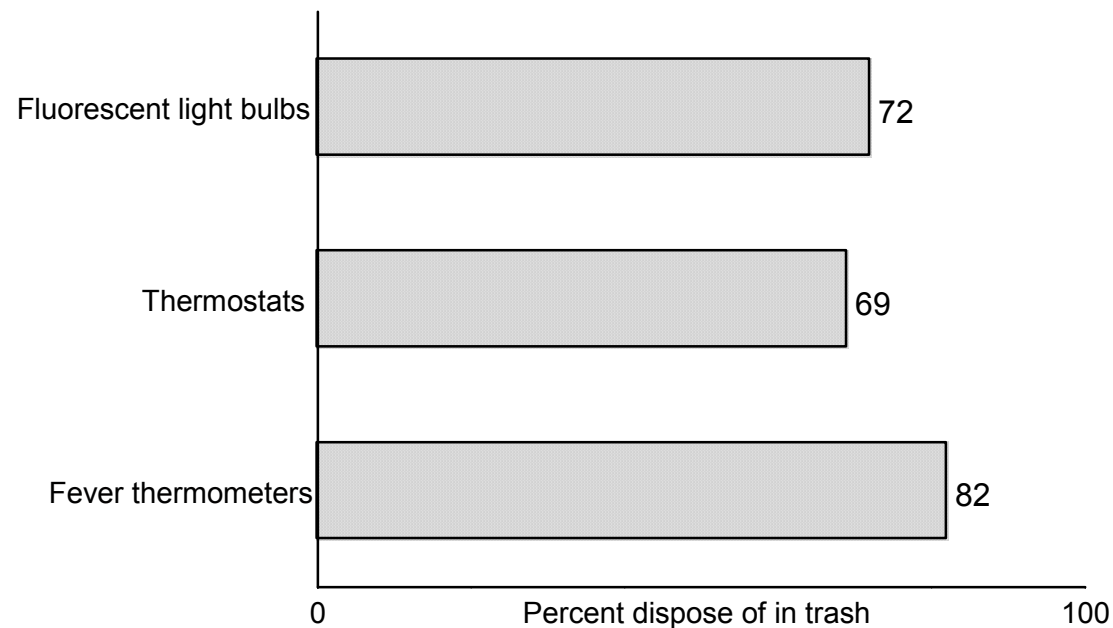
Awareness of Mercury Content in Household Items



Residents who say they've disposed of any of these items were asked how they disposed of it.

- For all three types of waste, "put it in the trash" is by far the most common disposal method. Fever thermometers, the item residents are most likely to know contains mercury, are disposed of in the trash by the highest percent of residents.

Percent of Residents Putting Items with Mercury Content in the Trash



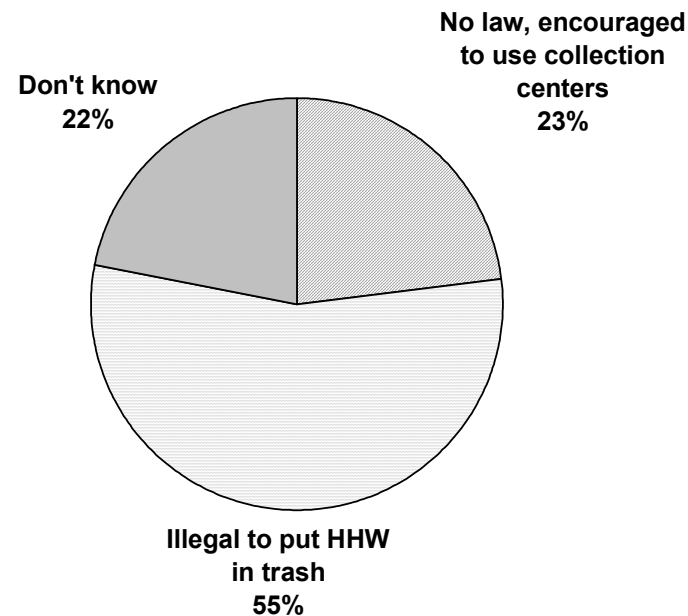
There is no clear consensus among residents about mercury contamination in state rivers and lakes.

- About one-third believes many rivers and lakes are closed to fishing due to mercury contamination, while a similar portion perceive that the mercury contamination poses no threat to fishing.
- Another one in four acknowledge that they do not know how to respond to this question.
- These results suggest that one of the reasons many residents are not properly disposing of items that contain mercury is that they do not understand the extent of mercury contamination in the state or its impact on the environment, and consequently don't consider seeking an alternative disposal method.

Which of the following statements is most accurate?	Percent
Many rivers and lakes in MA are closed to fishing due to mercury contamination of the fish	33
Some rivers and lakes in MA have mercury contamination, but it poses no threat to fishing	35
MA lakes and rivers not at all contaminated with mercury.	6
I don't know	26

Perceptions of Laws Regarding HHW Disposal

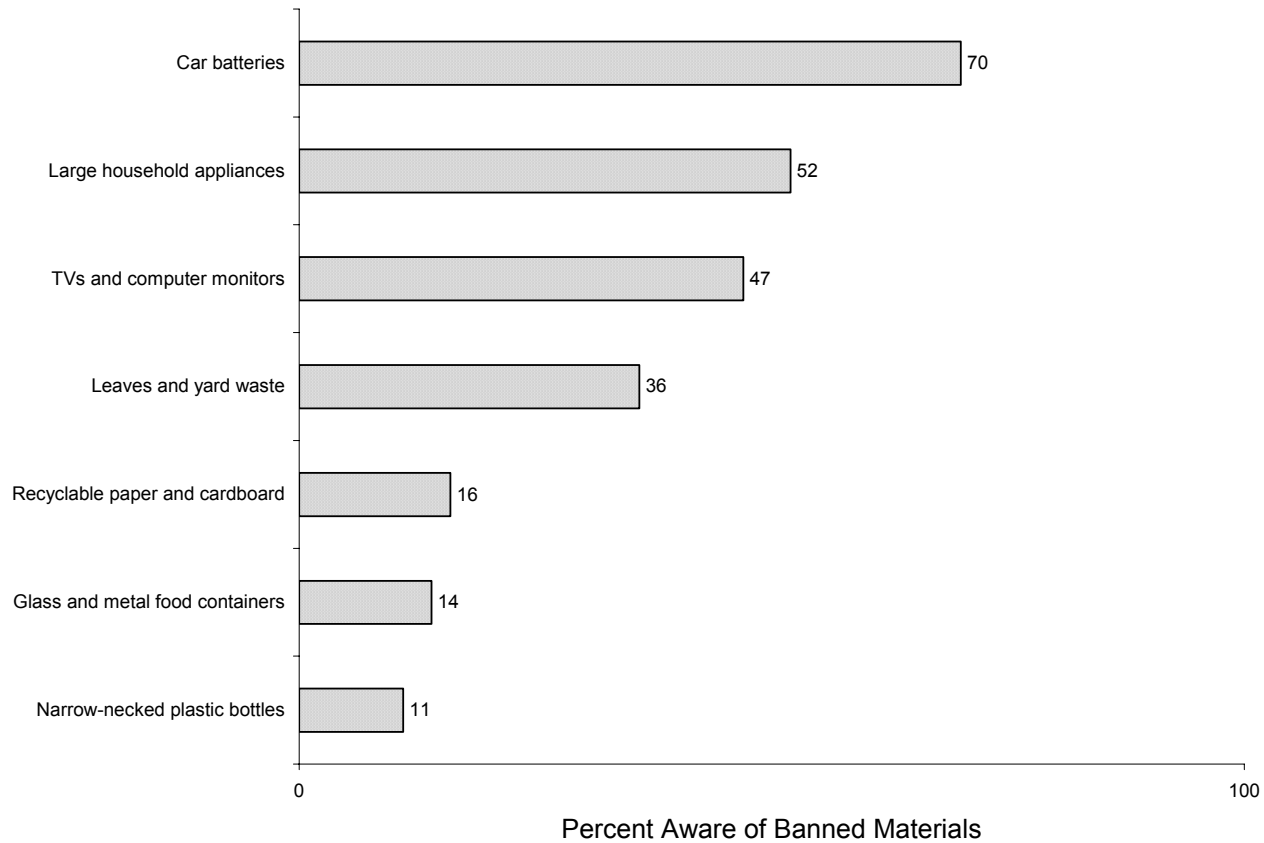
- More than one-half of residents statewide believe that it is illegal to dispose of household hazardous waste in the trash, while nearly one-fourth think it is encouraged, but there is no law on the issue. Another one in four “don’t know” enough to provide an opinion on this issue.
- Responses from residents in towns with permanent HHW collection centers are very similar to the statewide average.



Perceptions of Laws Regarding Disposal of Banned Materials

- Most residents are aware that there is a law prohibiting the disposal of car batteries (70%), while closer to half of residents are aware that large household appliances (52%) and TVs and computer monitors (47%) are banned.
- Residents are considerably less likely to know that items which are not HHW are also banned from disposal. About one-third of residents are aware that leaves and yard waste are banned (36%), while less than one-fifth are aware that bottles, containers, and recyclable paper and cardboard are also banned.

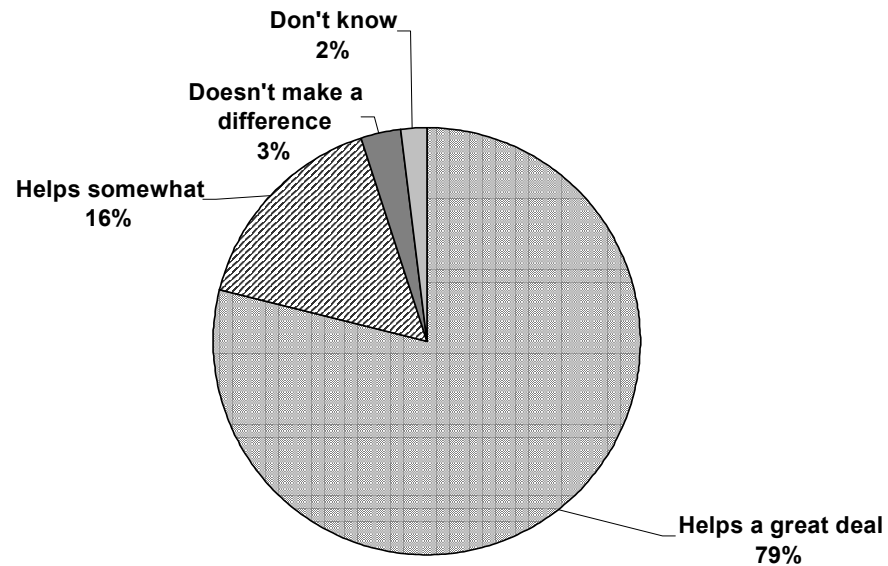
Awareness of Banned Materials



Perceptions of the Environmental Impact of Collection Programs

- When asked if using household hazardous waste collection programs helps to protect the environment, nearly eight in ten (79%) residents think it helps a great deal. Another 16% think it helps only somewhat, while only 5% think it makes no difference or don't know.

Perceptions of the environmental impact of using HHW collection programs



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Distribution of Respondents in Communities with HHW Collection Centers

- The 98 respondents residing in communities with permanent HHW collection centers were drawn from the following communities.

Community with HHW Collection Center	Percent of Respondents
Quincy	24
Somerville	17
Haverhill	13
Greenfield	10
Waltham	8
Arlington	7
Falmouth	3
Watertown	3
Bedford	3
Lexington	2
Lincoln	2
Concord	2
Belmont	2
Sturbridge	2

Distribution of Respondents in Communities with Pay-As-You-Throw Programs

- The 106 respondents residing in communities with pay-as-you-throw programs were drawn from the following communities.

Pay as you throw Communities	Percent of Respondents	Pay as you throw Communities	Percent of Respondents	Pay as you throw Communities	Percent of Respondents
Worcester	12	Belchertown	3	Hampden	1
Northhampton	7	Maynard	3	Seekonk	1
Westhampton	5	Scituate	2	Dighton	1
Taunton	5	Great Barrington	2	Oak Bluffs	1
Milton	5	Webster	2	North Reading	1
Clinton	4	Upton	2	Sudbury	1
North Attleboro	4	Holliston	2	Orange	1
Hudson	3	Amherst	2	Hawley	1
North Brookfield	3	Bridgewater	2	North Adams	1
Rehoboth	3	Foxborough	2	Ashfield	1
Gill	3	Phillipston	2	Williamstown	1
Gloucester	3	Ludlow	2	Wilbraham	1
Deerfield	3			Granville	1